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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,640	05/27/2005	Hubert Cecile Francois Martens	NL021224	2486

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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/536,640

Applicant(s)

MARTENS ET AL.

Examiner

P. Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. This application is a 371 of PCT/IB03/05565, filed on December 1, 2003.
2. Claims 1-9 are now pending.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

4. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

5. The specification is objected to because it lacks the appropriate section headings such as BACKGROUND OF THE INVENTION, BRIEF SUMMARY OF THE INVENTION, etc.
6. The disclosure is objected to because of the following informalities:

Page 1, line 1: "a" should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the method as claimed in claim 8" in line 2. There is insufficient antecedent basis for this limitation in the claim. Note that claim 8 is directed to an optical record carrier and not a method.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-5 & 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ootaki et al. (US 5,673,246).

In regard to claim 1, Ootaki et al. disclose a recording apparatus (Figure 1) for recording an information on a recordable optical record carrier (16) by irradiation of a light beam onto said record carrier for forming marks and lands representing said information along an information recording direction (“tangential direction” in Figure 3), comprising: a light source (Figure 1, element 11) for generating a light beam, optical means (12-15) for irradiating said light beam onto said record carrier (16), wherein said optical means (12-15) comprise means for reducing the numerical aperture of said optical means in the direction (“radial direction” in Figure 3) orthogonal to the information recording direction (“tangential direction” in Figure 3) during recording of information (abstract, lines 1-4: “makes a numerical aperture of an object lens in a radial direction of an optical disk smaller than that in a tangential direction”) to obtain a light beam (Figure 3, element 31) having a substantial oval spot profile having a shorter axis in the information recording direction (“tangential direction”) compared to the direction (“radial direction”) orthogonal thereto.

In regard to claim 2, Ootaki et al. disclose that said optical means (12-15) are adapted for increasing the numerical aperture of said optical means in the information recording direction (“tangential direction”) during recording of information (as shown by the beam spot 31 in Figure 3).

In regard to claim 3, Ootaki et al. disclose that said means for reducing the numerical aperture comprise a switchable non-round, in particular oval, aperture (see Figure 2A) in the light path from the light source to said record carrier during recording.

In regard to claim 4, Ootaki et al. disclose that the short axis of said aperture is by a factor of 0.7 to 0.99 shorter than the long axis (see column 3, lines 4-12: “the numerical aperture

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in the radial direction is set to be smaller by, for instance, a range from 2 to 10% than that in the tangential direction”, note also “NA is equal to X/f ” – tangential direction, and “NA is equal to Y/f ” – radial direction).

In regard to claim 5, Ootaki et al. disclose that said means for reducing the numerical aperture comprise a switchable beam-shaper (see Figure 2A) in the light path from the light source to said record carrier during recording to obtain a reduced rim-intensity of the light beam in the direction orthogonal to the information recording direction (as shown in Figure 3).

Claims 7-9 have limitations similar to those of claim 1; thus, they are rejected on the same basis.

11. Claims 1-5 & 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Taira et al. (US 6,026,072).

In regard to claim 1, Taira et al. disclose a recording apparatus (Figure 3) for recording an information on a recordable optical record carrier (32) by irradiation of a light beam onto said record carrier for forming marks and lands representing said information along an information recording direction, comprising: a light source (21) for generating a light beam, optical means (22-30) for irradiating said light beam onto said record carrier, wherein said optical means (22-30) comprise means for reducing the numerical aperture of said optical means in the direction orthogonal to the information recording direction during recording of information (column 10, lines 49-51) to obtain a light beam having a substantial oval spot profile having a shorter axis in the information recording direction compared to the direction orthogonal thereto (see Figure 13).

In regard to claim 2, Taira et al. disclose that said optical means are adapted for increasing the numerical aperture of said optical means in the information recording direction during recording of information (understood from the oval shaped marks in Figure 13).

In regard to claim 3, Taira et al. disclose that said means for reducing the numerical aperture comprise a switchable non-round, in particular oval, aperture in the light path from the light source to said record carrier during recording (see Figures 8-10).

In regard to claim 4, Taira et al. disclose that the short axis of said aperture is by a factor of 0.7 to 0.99 shorter than the long axis (column 6, lines 60-67).

In regard to claim 5, Taira et al. disclose that said means for reducing the numerical aperture comprise a switchable beam-shaper in the light path from the light source to said record carrier during recording to obtain a reduced rim-intensity of the light beam in the direction orthogonal to the information recording direction (see Figures 8-10).

Claims 7-9 have limitations similar to those of claim 1; thus, they are rejected on the same basis.

Allowable Subject Matter

12. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record alone or in combination fails to teach or suggest: in claim 6, a control means for control of said switchable means by switching said switchable means on or off by bringing said switchable means into the light path during recording.

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Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsuchiya et al. (US 6,201,777) disclose a single optical pickup provided with a single objective lens whose numerical aperture NA is variable with the substrate thickness and changing the numerical aperture NA of the objective lens through an elliptical aperture.

Yoo et al. (US 6,222,801) disclose an optical pickup having a variable iris 30 that adjusts the numerical aperture (NA) according to wavelengths of incident light in the case that the wavelengths of the incident light are different from each other.


15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Thursday 8:30-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P. Agustin
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ANDREA WELLINGTON
SUPERVISORY PATENT EXAMINER